



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,210	06/20/2003	Gordan G. Greenlee	END920030030US1	9020
26502	7590	06/16/2006	EXAMINER	
IBM CORPORATION IPLAW IQ0A/40-3 1701 NORTH STREET ENDICOTT, NY 13760			GENTRY, DAVID G	
			ART UNIT	PAPER NUMBER
			2114	

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/600,210	Applicant(s) GREENLEE ET AL.	
	Examiner David G. Gentry	Art Unit 2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 3/28/06.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14, 15 and 20-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14, 15, and 20-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 14, 20, 22, and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In these claims, it is stated that when a server is currently operational but does not successfully handle a request in a certain amount of time, a memory dump is then automatically initiated. This is not supported by the specification. In the specification, the memory dump is only initiated if the server is deemed "Non-responsive" (page 9, lines 18-19 of specification).

### ***Claim Rejections - 35 USC § 103***

Claims 14 and 22 are rejected under 35 U.S.C. 103(a) as being anticipated by Holt et al. (U.S. Patent No. 6,601,061) in view of Smullen et al. (U.S. Patent No. 6,687,799).

As per claims 14 and 22, Holt discloses a method for managing a plurality of servers in a cluster (figure 1), said method comprising the steps of:

setting a threshold equal to an integer greater than one (column 5, lines 57-62);

sending a request to one of said servers, determining that said one server is currently operational but did not successfully handle said request within a predetermined amount of time, incrementing a count, comparing said count to said threshold, determining that said count is less than said threshold and therefore, taking no corrective action (column 5, line 57- column 6, line 3); and

sending another request to said one server, determining that said one server did not successfully handle said request within said predetermined amount of time, incrementing said count, and in response, comparing said count to said threshold, determining that said count equals or exceeds said threshold (column 5, line 57- column 6, line 3).

Holt fails to disclose a method where a memory dump takes place.

Smullen discloses a method wherein a memory dump is automatically initiated (column 1, lines 18-40).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the memory dump as described by Smullen in the method described by Holt. It would have been obvious because it is a necessary function when reloading a computer (column 1, lines 6-15) or after a failure (column 3, lines 23-27) to save data, such as the search data described in Holt.

Claims 15 and 23 are rejected under 35 U.S.C. 103(a) as being anticipated by Holt in view of Smullen in further view of AAPA (Applicant Admitted Prior Art).

Holt and Smullen are relied upon for reasons stated in the previous section.

As per claims 15 and 23, Holt discloses a method wherein said servers reside on a network (column 1, lines 16-21).

Holt fails to disclose a method where a memory dump takes place.

Smullen discloses a method wherein a memory dump is automatically initiated, bypassing the network dispatcher (column 1, lines 18-40; Note: it is understood that the network dispatcher as shown in the AAPA below is bypassed when this memory dump takes place).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the memory dump as described by Smullen in the method described by Holt. It would have been obvious because it is a necessary function when reloading a computer (column 1, lines 6-15) or after a failure (column 3, lines 23-27) to save data, such as the search data described in Holt.

Holt and Smullen fail to disclose a method wherein the request is a test request that bypasses the network dispatcher.

The AAPA discloses a method:

wherein the first said request and said other request are test requests to determine if said one server is currently operational and handles the test requests within said predetermined amount of time (page 2, lines 9-16);

further comprising the steps of client computers sending client requests to a network dispatcher for said servers, and said network dispatcher dispatching said client requests to said servers including said one server (page 2, lines 9-16);

Art Unit: 2114

wherein said first request, said other request bypass said network dispatcher (page 2, lines 9-16).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the network dispatcher as described by the AAPA in the method described by Holt and Smullen. It would have been obvious because it is a well-known method used to test a server after it has failed (page 2, lines 9-10).

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al. (U.S. Patent No. 6,434,713) in view of Smullen, Holt, and Kubo (U.S. Patent No. 6,986,139).

Shin discloses a system for managing a plurality of servers in a cluster, said system comprising:

means for sending a request to one of said servers, determining that said one server is not currently operational, is currently operational and handled said request after a first predetermined time but before a second, greater predetermined time, or is currently operational and did not handle said request by said predetermined time (column 2, lines 25-41).

Shin fails to disclose a system where a count is incremented and a threshold is set.

Holt discloses a system for managing a plurality of servers in a cluster (figure 1), said system comprising the steps of:

setting a threshold equal to an integer greater than one (column 5, lines 57-62);

Art Unit: 2114

in response to an abnormal response time, incrementing a count, comparing said count to said threshold, and determining that said count is less than said threshold and in response, taking no corrective action (column 5, line 57- column 6, line 3); and

in response to an abnormal response time, incrementing a count, comparing said count to said threshold, and determining that said count equals or exceeds said threshold (column 5, line 57- column 6, line 3).

It would have been obvious to a person of ordinary skill in the art to include the system described by Holt in the system described by Shin. It would have been obvious because Holt's system is used to determine that there is definitely something wrong with the servers (column 5, line 57- column 6, line 3).

Shin and Holt fail to disclose a system with means to initiate a remote restart or a memory dump.

Smullen discloses a system comprising:

means, responsive to said one server not currently being operational, for automatically issuing a remote restart of said one server (column 5, lines 37-39; column 3, lines 43-45), and

means for automatically initiating a memory dump of said one server (column 1, lines 18-40).

It is understood that not handling said request by said second predetermined time and the server not being operational are taken as being the same abnormal condition, or a halt condition as shown in Smullen. It is further understood that the halt

Art Unit: 2114

described by Smullen is the same as what happens when the response takes longer than the second predetermined time in Shin.

It would have been obvious to a person of ordinary skill in the art to include the system described by Smullen in the system described by Shin and Holt. It would have been obvious because it is a necessary function after a failure (column 3, lines 23-27) to save data.

Shin, Holt, and Smullen fail to disclose a means for reducing the rate of requests received by a server.

Kubo discloses a system comprising:

means, responsive to said one server currently being operational and handling said request after said first predetermined time but before said second predetermined time, for automatically notifying a dispatcher for said one server to reduce a rate of dispatching new requests to said one server (column 1, lines 36-46).

It would have been obvious to a person of ordinary skill in the art to include the system described by Kubo in the system described by Shin, Holt, and Smullen. It would have been obvious because Kubo's system allows for the system to be effectively load-balanced in case one or more of the servers is carrying too much of the load (column 1, lines 15-29).

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shin, Smullen, Holt, and Kubo in further view of AAPA.



Art Unit: 2114

Shin, Smullen, Holt, and Kubo are relied upon for reasons stated in the previous section.

Shin, Holt, and Kubo fail to disclose a network dispatcher that is bypassed by the memory dump.

Smullen discloses a method wherein a memory dump is automatically initiated, bypassing the network dispatcher (column 1, lines 18-40; Note: it is understood that the network dispatcher as shown in the AAPA below is bypassed when this memory dump takes place).

The AAPA discloses a system:

further comprising a network dispatcher for receiving client requests from client computers and dispatching said client requests to said servers including said one server (page 2, lines 9-16); and

wherein said first request, and other requests bypass said network dispatcher (page 2, lines 9-16).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the network dispatcher as described by the AAPA in the method described by Shin, Smullen, Holt, and Kubo. It would have been obvious because it is a well-known method used to test a server after it has failed (page 2, lines 9-10).

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shin in view of Smullen and Kubo.

Art Unit: 2114

Shin discloses a system for managing a plurality of servers in a cluster, said system comprising:

means for sending a request to one of said servers, determining that said one server is not currently operational, is currently operational and handled said request after a first predetermined time but before a second, greater predetermined time, or is currently operational and did not handle said request by said predetermined time (column 2, lines 25-41).

Shin fails to disclose a system with means to initiate a remote restart or a memory dump.

Smullen discloses a system comprising:

means, responsive to said one server not currently being operational, for automatically issuing a remote restart of said one server (column 5, lines 37-39; column 3, lines 43-45), and

means for automatically initiating a memory dump of said one server (column 1, lines 18-40).

It is understood that not handling said request by said second predetermined time and the server not being operational are taken as being the same abnormal condition, or a halt condition as shown in Smullen. It is further understood that the halt described by Smullen is the same as what happens when the response takes longer than the second predetermined time in Shin.

It would have been obvious to a person of ordinary skill in the art to include the system described by Smullen in the system described by Shin. It would have been

Art Unit: 2114

obvious because it is a necessary function after a failure (column 3, lines 23-27) to save data.

Shin and Smullen fail to disclose a means for reducing the rate of requests received by a server.

Kubo discloses a system comprising:

means, responsive to said one server currently being operational and handling said request after said first predetermined time but before said second predetermined time, for automatically notifying a dispatcher for said one server to reduce a rate of dispatching new requests to said one server (column 1, lines 36-46).

It would have been obvious to a person of ordinary skill in the art to include the system described by Kubo in the system described by Shin and Smullen. It would have been obvious because Kubo's system allows for the system to be effectively load-balanced in case one or more of the servers is carrying too much of the load (column 1, lines 15-29).

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shin, Smullen, and Kubo in further view of AAPA.

Shin, Smullen, and Kubo are relied upon for reasons stated in the previous section.

Shin and Kubo fail to disclose a network dispatcher that is bypassed by the memory dump.

Smullen discloses a method wherein a memory dump is automatically initiated, bypassing the network dispatcher (column 1, lines 18-40; Note: it is understood that the network dispatcher as shown in the AAPA below is bypassed when this memory dump takes place).

The AAPA discloses a system:

further comprising a network dispatcher for receiving client requests from client computers and dispatching said client requests to said servers including said one server (page 2, lines 9-16); and

wherein said first request, and other requests bypass said network dispatcher (page 2, lines 9-16).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the network dispatcher as described by the AAPA in the method described by Shin, Smullen, and Kubo. It would have been obvious because it is a well-known method used to test a server after it has failed (page 2, lines 9-10).

### ***Response to Applicants' Arguments***

First, applicant has argued that Smullen fails to disclose a memory dump when the server is operational but did not handle the request in a predetermined amount of time. As shown in the 35 U.S.C. 112 first paragraph rejection seen above, the statement that the server is operational is not found in the specification of the application. Therefore, this statement does not apply and Smullen is used in

Art Unit: 2114

conjunction with Holt in determining that system is not working (is halted) and a memory dump is performed.

Second, applicant has argued that new claim 20 is allowable over the prior art. Claim 20 is rejected under 35 U.S.C. 103(a). See above for details.

Third, applicant has argued that claims 15 and 21-25 are allowable over the prior art. Claims 15 and 21-25 are rejected under 35 U.S.C. 103(a). See above for details.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2114

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David G. Gentry whose telephone number is (571) 272-2570. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**SCOTT BADERMAN**  
**SUPERVISORY PATENT EXAMINER**